

C L A I M S

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1. A data processing method for a customer request comprising the steps of:
- 10 a) receiving a request for at least one item at a central data processing system;
- b) generating a plurality of sub-requests for a plurality of partner systems where each sub-request is assigned to an internal or external system by means of rules;
- 15 c) generating a separate unique identifier for each of the sub-requests;
- d) storing the unique identifiers being assigned to the sub-requests, in a retrievable medium;
- e) sending the sub-requests with the unique identifiers to partner systems;
- 20 f) receiving back sub-responses at the central data processing system, said sub-responses having unique identifiers in association with the unique identifiers of the request;
- g) generating a response based on association of the sub-responses with the original item;
- h) sending the response back to the customer data processing system.
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2. The method of claim 1, wherein said sending of the sub-requests to partner systems further comprises at least one of the following steps:
- sending a sub-request for a partner search or a partner availability check at item level or:
- 30 - determining at least one business system or an availability check for this system at item level.
3. The method of claim 2, wherein performing of the partner search is done with the use of functions.
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4. The method of claim 3, wherein the functions comprise standard functions, as well as functions of customers and partners.

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5. The method of claim 2, whereby the partner system which received the request for availability check temporarily reserves a requested resource that has been identified as available.

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6. The method of claim 5, whereby the partner system deletes the reservation for the requested resources unless the central data processing system sends a message if no acceptance is received from the customer within the predetermined time interval.

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7. The method of any one of the preceding claims, wherein the request comprises a plurality of items and steps b) to g) are carried out for each item.

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8. The method of any one of the preceding claims, whereby the request comprising a plurality of items is processed in a looping mode.

9. The method of any one of the preceding claims, wherein the request for the at least one item has a structure of an order-like document that comprises:

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- a header section;
- at least one item;
- at least one schedule line per item comprising information regarding requested by the customer a delivery date and a quantity.

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10. The method of any one of the preceding claims, wherein the step b) includes criteria defined by the customer.

11. The method of any one of the preceding claims, further comprising the following steps conducted prior to step h):

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- 5 - comparing at least one sub-response to the preferred choice specified by a customer;
- selecting a preferred choice from the group consisting of the at least one sub-response.
- 10 12. The method of claim 11, wherein the act of selecting the preferred choice is based on customer's preferences.
13. The method of claim 11 or 12, wherein asynchronous communication means are used and the sub-responses are aggregated in the database
- 15 until all sub-responses have been received.
14. A central data processing system for processing of the customer request comprising:
- a) means for receiving the request (114; 414; 514) for at least one
- 20 item at a central data processing system (108);
- b) means for generating a plurality of sub-requests (430;530) for plurality of partners where each sub-request is assigned to an internal or external system by means of the rules (118; 418; 518);
- c) means for generating a separate unique identifier (116;416;516)
- 25 for each of the sub-requests;
- d) means for storing the unique identifiers being assigned to the sub-requests, in a retrievable medium (112; 412; 512);
- e) means for sending the sub-requests with the unique identifiers to partner systems;
- 30 f) means for receiving back sub-responses (432; 532) at the central data processing system, said sub-responses having unique identifiers in association with the unique identifiers of the request;
- g) means for generating a response (434; 534) based on association of the sub-responses with the original item;
- 35 h) means for sending the response back to the customer data processing system.

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15. The central data processing system of claim 14, whereby a central data processing system further comprises interfaces for communication between a sales system, the purchasing system, the manufacturing system, the planning system and other internal or external systems.

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16. The system of claim 14 or 15, further comprising asynchronous communication means being adapted to the use of database tables for storage of the sub-responses.

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17. The system of claim 16, wherein the means of generating a response based on association of the sub-responses with the original item and sending the response back to the customer data processing system, in case of the asynchronous communication, are applied only when all the requested sub-responses are collected in the database.

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18. The system of claim 17, wherein the asynchronous communication means are adapted to execute a query to determine if all necessary sub-responses have been collected.

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19. A computer-readable storage medium holding code for performing the steps of:

- a) receiving a request for at least one item at a central data processing system;
- b) generating a plurality of sub-requests for plurality of partners where each sub-request is assigned to an internal or external system by means of rules;
- c) generating a separate unique identifier for each of the sub-requests;
- d) storing the unique identifiers being assigned to the sub-requests, in a retrievable medium;

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- 5 e) sending the sub-requests with the unique identifiers to partner systems;
- f) receiving back sub-responses at the central data processing system, said sub-responses having unique identifiers in association with the unique identifiers of the request;
- 10 g) generating a response based on association of the sub-responses with the original item;
- h) sending the response back to the customer data processing system.

15 20. A data processing system for processing a request (614), the data processing system comprising:

- 20 - means (610, 618) for selecting an asynchronous or a synchronous communication mode for communication with partner computer systems,
- means for splitting the request into a set of sub-requests (630),
- synchronous communication means (610, 613) being adapted to send a first one of the sub-requests of the set of sub-requests to one of the partner computer systems, wait for the respective sub-response from the one of the partner computer systems and send a second one of the sub-requests of the set of sub-requests to one of the partner computer systems after the sub-response has been received, wherein the sub-responses are stored in a random access memory (613),
- 25 - asynchronous communication means (610, 612) being adapted to send the sub-requests in parallel to the partner computer systems, store respective sub-responses of the partner computer systems in a database (612) on a non-volatile storage device,
- 30 - means (610) for combining the sub-responses to generate a response to the request,
- 35 - means (610, 619) for sending the response.

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21. The data processing system of claim 20, wherein the means for selecting the asynchronous or synchronous communication mode comprises a set of rules (6189) to be applied on the request.

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22. The data processing system of claim 21, wherein the means for splitting the request into a set of sub-requests uses the set of rules for the splitting operation.

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23. The data processing system of claims 20, 21 or 22, the asynchronous communication means being adapted to check the database for completeness for each incoming sub-response.

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24. The data processing system of claim 23, the asynchronous communication means being adapted to perform the check of the database by performing a database query using the sub-request and sub-response identifiers as keys.

25. A method for processing a request comprising:

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- selecting an asynchronous or synchronous communication mode for communication with partner computer systems,
- splitting the request into a set of sub-requests,
- if the synchronous communication mode has been selected:
 - 30 sending a first one of the sub-requests of the set to one of the partner computer systems, waiting for the respective sub-response from the one of the partner computer systems, sending a second one of the sub-requests of the set to a second one of the partner computer systems after the sub-response from the first one of the partner computer systems has been received,
 - 35 wherein the sub-responses are stored in a random access memory,

- 5 - if the asynchronous communication mode has been selected:
 sending a plurality of the sub-requests in parallel to partner
 computer systems, storing respective sub-responses of the
 partner computer systems in a database on a non-volatile
 storage device,
- 10 - combining the sub-responses to generate a response to the
 request,
 - sending the response to the requestor.
- 15 26. The data processing method of claim 25, wherein a set of rules is used for
 selecting the asynchronous or the synchronous communication mode and
 for splitting the request into a set of sub-requests.
- 20 27. The data processing methods of claim 25 or 26, further comprising
 checking the asynchronous communication mode, checking the database
 for completeness with each incoming sub-response.
- 25 28. The data processing method of claim 27, wherein a database query is
 performed for each incoming sub-response, in order to determine whether
 all sub-responses for the request have been received.
29. A computer program product comprising computer executable instructions
 for performing a method in accordance with anyone of the preceding
 claims 25 to 28.